

Project #47516.00

# ***STORMWATER MANAGEMENT SYSTEM INSPECTION & MAINTENANCE MANUAL***

**F O R**

## **HUCKINS REVOCABLE TRUST SUBDIVISION**

**22 Hillside Drive  
Strafford, New Hampshire  
Strafford County**

**Tax Map 11, Lot 4, 4-A and 4-B**

**Owned by and Prepared for  
Bertha L. Huckins Revocable Trust**

**May 9, 2023**

**Prepared By:**



Civil Engineers  
Structural Engineers  
Traffic Engineers  
Land Surveyors  
Landscape Architects  
Scientists



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## **Maintenance of Property**

TFMoran, Inc., has prepared the following Stormwater Management System Inspection & Maintenance Plan for Bertha L. Huckins Revocable Trust at 22 Hillside Drive, Strafford, New Hampshire. The intent of this plan is to provide the owner, and future property managers/owners of the site with a list of procedures that document the inspection and maintenance requirements of the Stormwater Management System for this development. This includes all temporary and permanent stormwater and erosion control measure during and post construction.

## **Plans**

Refer to the Site Development Plans prepared by MSC a divisions TFMoran, Inc. for Tax Map 11 Lot 4-4, 22 Hillside Drive, Strafford, New Hampshire, dated April 10, 2023. ed hereon.

## **Owner Responsibility**

The owner shall be responsible for the following inspection and maintenance program which is necessary to keep the Stormwater Management System functioning properly. These measures will help greatly to reduce potential environmental impacts. By following the enclosed procedures, Bertha L. Huckins Revocable Trust and its successors will be able to maintain the functional design of the Stormwater Management System and maximize its ability to remove sediment and other contaminants from site-generated stormwater runoff.

The owner and future owners are the responsible party for the following record keeping activities further identified in this Inspection & Maintenance Manual:

- Conduct reporting, inspection, and maintenance activities in accordance with the “Inspection and Maintenance Checklist Requirements” and if applicable “Regular Inspection and Maintenance Guidance” provided by University of New Hampshire Stormwater Center (UNHSC);
- Document each inspection and maintenance activity with the “Inspection and Maintenance Log” and if applicable “Checklist for Inspection” provided by University of New Hampshire Stormwater Center (UNHSC);
- Photograph each practice that is subject to the “Inspection and Maintenance Checklist Requirements” at each inspection of that stormwater practice;
- Document actions taken if invasive species begin to grow in the stormwater management system; and
- Document each application of deicing material applied to the site with the “Deicing Log”

All record keeping required by the Inspection & Maintenance Manual shall be maintained by the responsible party and be made available to the applicable regulatory agencies (i.e. Town of Strafford, etc.) upon request. Logs and reports required by this Inspection & Maintenance Manual should be prepared by a qualified inspector with working knowledge of the site. This manual and associated records shall be transferred to any future owners.

All current and future owners must comply with RSA 485-A:17, Env-Wq 1500, the permit, and all conditions contained in the permit.

The following inspection and maintenance program is necessary in order to keep the Stormwater Management System functioning properly. These measures will greatly help to reduce potential environmental impacts. By following the enclosed procedures, Bertha L. Huckins Revocable Trust and its successors will be able to maintain the functional design of the Stormwater Management System and maximize its ability to remove sediment and other contaminants from site-generated stormwater runoff.

## **General Inspection and Maintenance Requirements**

*Temporary* stormwater, sediment and erosion control measures that require maintenance on the site during construction include, but are not limited, to the following:

- Stabilized construction entrance;
- Litter/trash removal;
- Silt sock barriers;
- Gravel.

*Permanent* stormwater, sediment and erosion control measures that require maintenance on the site include, but are not limited, to the following:

- Litter/trash removal;
- Landscaping and hardscaping;
- Gravel surface;
- Bioretention system;
- Forebays;
- Rip-rap outlet protection;
- Culvert pipes;
- Emergency overflow;
- Outlet control structures;
- Surface maintenance related to deicing/plowing.

## **Inspection and Maintenance Checklist Requirements**

By implementing the following procedures, current owners will be able to maintain the functional design of the Stormwater Management System and maximize the systems ability to remove sediment and other contaminants from site-generated stormwater runoff. The owner shall conduct inspection and maintenance activities in accordance with the following checklist:

	<b><i>Frequency</i></b>	<b><i>Inspect</i></b>	<b><i>Action</i></b>
<i>Temporary Controls</i>			
<b>Stabilized Construction Entrance</b>	Weekly	<ul style="list-style-type: none"> <li>• Inspect adjacent roadway for sediment tracking</li> <li>• Inspect stone for sediment accumulation</li> </ul>	<ul style="list-style-type: none"> <li>• Sweep adjacent roadways as soon as sediment is tracked</li> <li>• Top dress with additional stone when necessary to prevent tracking</li> </ul>
<b>Litter/Trash Removal</b>	Routinely	<ul style="list-style-type: none"> <li>• Inspect site especially construction areas</li> </ul>	<ul style="list-style-type: none"> <li>• Remove debris and clean areas as necessary</li> </ul>
<b>Silt Sock Barrier</b>	Weekly and after measurable rainfall	<ul style="list-style-type: none"> <li>• Inspect accumulated sediment level, rips and tears</li> </ul>	<ul style="list-style-type: none"> <li>• Repair or replace damaged lengths</li> <li>• Remove and dispose accumulated sediment once level reaches 1/3 of barrier</li> </ul>
<b>Gravel</b>	Spring and Fall	<ul style="list-style-type: none"> <li>• Inspect gravel for ruts and depth</li> </ul>	<ul style="list-style-type: none"> <li>• Replace gravel as necessary, regrade as necessary to maintain design grades, remove any accumulated gravel washed from roadway</li> </ul>

	<b>Frequency</b>	<b>Inspect</b>	<b>Action</b>
<i>Permanent Controls</i>			
<b>Landscaping and hardscaping (not including Bioretention Systems)</b>	Spring	<ul style="list-style-type: none"> <li>• Mulch/stone: Inspect mulch areas for trash and debris and thickness of mulch</li> </ul>	<ul style="list-style-type: none"> <li>• Remove weeds, invasive species, and debris. Top dress with new mulch or stone when necessary</li> </ul>
	Spring	<ul style="list-style-type: none"> <li>• Trees and Shrubs: Inspect for broken, weak or diseased branches and debris</li> </ul>	<ul style="list-style-type: none"> <li>• Prune to maintain shape to avoid splitting, remove broken, weak or diseased branches, replace as necessary</li> </ul>
	As necessary	<ul style="list-style-type: none"> <li>• Lawn</li> </ul>	<ul style="list-style-type: none"> <li>• Mow as required</li> </ul>
	Spring and Fall	<ul style="list-style-type: none"> <li>• Inspect landscaped areas for debris and litter</li> </ul>	<ul style="list-style-type: none"> <li>• Remove debris and litter as necessary</li> </ul>
<b>Pretreatment/Treatment Swale</b>	Annually	<ul style="list-style-type: none"> <li>• Inspect for erosion, sediment, buildup and presence of invasive species.</li> </ul>	<ul style="list-style-type: none"> <li>• Periodic mowing required</li> <li>• Remove debris and accumulated sediment, based on inspection</li> <li>• Repair eroded areas, remove invasive species and dead vegetation and reseed with applicable grass mix</li> </ul>
<b>Bioretention System</b>	1st few months when rainfall exceeds 2.5" in a 24 hr period	<ul style="list-style-type: none"> <li>• Inspect drawdown time: required to drawdown in 72 hrs or the standing water covers more than 15% of the surface after 48 hrs</li> </ul>	<ul style="list-style-type: none"> <li>• Remove the top few inches of discolored material and rake or till the remaining material as needed</li> </ul>

	<b>Frequency</b>	<b>Inspect</b>	<b>Action</b>
<b>Permanent Controls</b>			
	4 times for 1 <sup>st</sup> yr, then Spring and Fall	<ul style="list-style-type: none"> <li>• Inspect for animal burrows and short circuits in the system</li> <li>• Inspect inlet and outlet for debris and leaves</li> <li>• Inspect the filter bed</li> <li>• Inspect vegetation for distress during extended periods without rain</li> </ul>	<ul style="list-style-type: none"> <li>• Repair soil erosion from and fill holes and lightly compact</li> <li>• Remove material with rakes where possible rather than heavy construction equipment to avoid compaction of the gravel wetland surface</li> <li>• Remove sediment as necessary. If more than 2" of filter material is removed, replace with the design filter media specified</li> <li>• Water as necessary</li> </ul>
	Spring and Fall	<ul style="list-style-type: none"> <li>• Inspect Drawdown time: required to drawdown in 72 hrs or the standing water covers more than 15% of the surface after 48 hrs</li> </ul>	<ul style="list-style-type: none"> <li>• Remove the top few inches of discolored material and rake or till the remaining material as needed</li> </ul>
	Annually	<ul style="list-style-type: none"> <li>• Inspect inlet and outlet for erosion</li> <li>• Inspect vegetative cover</li> </ul>	<ul style="list-style-type: none"> <li>• Repair or replace as necessary</li> <li>• Reinforcement plantings should be performed if 50% cover is not established in 2 yrs.</li> </ul>
<p>Additionally, refer to the most currently available documents from UNHSC (attached for reference): "Regular Inspection Maintenance Guidance" and "Checklist for Inspection". If there are discrepancies between the UNHSC documents and this Manual's checklist requirements, the stricter requirements shall override.</p>			



	<b>Frequency</b>	<b>Inspect</b>	<b>Action</b>
<b>Permanent Controls</b>			
<b>Forebay</b>	Annually	<ul style="list-style-type: none"> <li>• Inspect for debris and accumulated sediment</li> <li>• Inspect for damage or displaced stones</li> </ul>	<ul style="list-style-type: none"> <li>• Remove debris and accumulated sediment as necessary</li> <li>• Repair and replace stones as needed</li> </ul>
<b>Vegetated Filter Strip</b>	Annually	<ul style="list-style-type: none"> <li>• Inspect for erosion, sediment, buildup or vegetation loss.</li> </ul>	<ul style="list-style-type: none"> <li>• Periodic mowing required</li> <li>• Remove debris and accumulated sediment especially at the upper edge of the filter strip</li> <li>• Repair and replant eroded areas</li> </ul>
<b>Rip Rap Outlet Protection</b>	Spring and Fall and after rainstorms exceeding 2.5 inches in 24 hrs	<ul style="list-style-type: none"> <li>• Inspect for damage or displaced stones</li> <li>• Inspect for torn or visible fabric</li> </ul>	<ul style="list-style-type: none"> <li>• Repair and replace stone and / or fabric immediately</li> <li>• Remove accumulated sediment, trash and blocking materials</li> <li>•</li> </ul>
<b>Culvert Pipe</b>	Spring and Fall	<ul style="list-style-type: none"> <li>• Inspect for obstructions</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Remove and dispose of debris properly, Remove upstream debris to prevent future clogging</li> <li>• Repair/replace if pipe becomes crushed or deteriorated</li> </ul>
<b>Emergency Overflow</b>	Spring and Fall	<ul style="list-style-type: none"> <li>• Inspect for erosion, sediment accumulation, stone loss, and presence of invasive species</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Remove debris and accumulated sediment (sediment accumulation should not exceed 3")</li> <li>• Repair eroded areas</li> <li>• Remove invasive species and vegetation</li> <li>• Replace stone as necessary</li> <li>•</li> </ul>

	<i>Frequency</i>	<i>Inspect</i>	<i>Action</i>
<i>Permanent Controls</i>			
<b>Outlet Control Structure</b>	Annually	<ul style="list-style-type: none"> <li>• Inspection for debris or sediment buildup</li> <li>• Inspect structure</li> </ul>	<ul style="list-style-type: none"> <li>• Remove sediment and debris as necessary</li> <li>• Remove debris covering orifice or v-notch</li> <li>• Repair as necessary</li> </ul>

## **Inspection and Maintenance Records**

A detailed, written record of all logs, reports, photographs required by this Inspection & Maintenance Manual must be kept by the owner.

The attached forms are provided to assist the property manager with the inspection and maintenance of the Stormwater Management System. The “Inspection and Maintenance Log” (Attachment 1) and “Deicing Log” (Attachment 2) on the following pages are a blank copy to aid in record keeping required by this Inspection & Maintenance Manual.

Supplement the “Inspection and Maintenance Log” with the most currently available “Checklist for Inspections” from UNHSC (attached to this Manual for reference). Each inspection or maintenance activity shall include photographs of each practice that is subject to the “Inspection and Maintenance Checklist Requirements” at each inspection of that stormwater practice. Log actions taken if invasive species begin to grow in the stormwater management system as required per the attached “Control of Invasive Plants”.

For all surface maintenance related activities related to deicing/plowing, complete the “Deicing Log” to track the amount and type of deicing materials applied to the site. No winter sanding of is permitted on permeable pavements or porous asphalt. Minimization of salt application for ice control is recommended on or where runoff may discharge to these areas. Snow shall be stored in designated snow storage areas which have been designed to drain on-site and receive treatment via the stormwater management system prior to infiltration or discharge.

## **Owner's Certification**

### Contact Information

Owner: Bertha L. Huckins Revocable Trust  
Contact Person Joe and Cindy Cushing  
8 Hillside Drive  
Strafford, NH 03884  
(603) 664-5521

I have reviewed this document and understand the responsibilities contained. I agree to perform the required maintenance on the stormwater management system.

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Owner's Signature (future owner's and successors, if applicable)

---

Print Name

---

Title

---

Date

Any inquiries in regards to the design, function, and/or maintenance of any one of the above mentioned facilities or tasks shall be directed to the project engineer:

TFMoran, Inc. Seacoast Division  
170 Commerce Way, Suite 102  
Portsmouth, NH 03801  
603-431-2222



# **ATTACHMENT 1**

Inspection and Maintenance Log









## **ATTACHMENT 2**

Deicing Log







## **APPENDIX A**

UNHSC Regular Inspection and Maintenance Guidelines &  
UNHSC Checklist for Inspection



## Regular Inspection and Maintenance Guidance for Bioretention Systems / Tree Filters

Maintenance of bioretention systems and tree filters can typically be performed as part of standard landscaping. Regular inspection and maintenance is critical to the effective operation of bioretention systems and tree filters to insure they remain clear of leaves and debris and free draining. This page provides guidance on maintenance activities that are typically required for these systems, along with the suggested frequency for each activity. Individual systems may have more, or less, frequent maintenance needs, depending on a variety of factors including the occurrence of large storm events, overly wet or dry (I.E., drought), regional hydrologic conditions, and the upstream land use.

### ACTIVITIES

The most common maintenance activity is the removal of leaves from the system and bypass structure. Visual inspections are routine for system maintenance. This includes looking for standing water, accumulated leaves, holes in the soil media, signs of plant distress, and debris and sediment accumulation in the system. Mulch and/or vegetation coverage is integral to the performance of the system, including infiltration rate and nutrient uptake. Vegetation care is important to system productivity and health.

ACTIVITY	FREQUENCY
<p>A record should be kept of the time to drain for the system completely after a storm event. The system should drain completely within 72 hours.</p> <p>Check to insure the filter surface remains well draining after storm events. <b>Remedy:</b> If filter bed is clogged, draining poorly, or standing water covers more than 15% of the surface 48 hours after a precipitation event, then remove top few inches of discolored material. Till or rake remaining material as needed.</p>	<p>After every major storm in the first few months, then biannually.</p>
<p>Check inlets and outlets for leaves and debris. <b>Remedy:</b> Rake in and around the system to clear it of debris. Also, clear the inlet and overflow if obstructed.</p>	
<p>Check for animal burrows and short circuiting in the system. <b>Remedy:</b> Soil erosion from short circuiting or animal borroughs should be repaired when they occur. The holes should be filled and lightly compacted</p>	<p>Quarterly initially, biannually, frequency adjusted as needed after 3 inspections</p>
<p>Check to insure the filter bed does not contain more than 2 inches accumulated material <b>Remedy:</b> Remove sediment as necessary. If 2 inches or more of filter bed has been removed, replace media with either mulch or a (50% sand, 20% woodchips, 20% compost, 10% soil) mixture.</p>	
<p>During extended periods without rainfall, inspect plants for signs of distress. <b>Remedy:</b> Plants should be watered until established (typical only for first few months) or as needed thereafter.</p>	
<p>Inspect inlets and outlets to ensure good condition and no evidence of deterioration. Check to see if high-flow bypass is functioning. <b>Remedy:</b> Repair or replace any damaged structural parts, inlets, outlets, sidewalls.</p>	<p>Annually</p>
<p>Check for robust vegetation coverage throughout the system. <b>Remedy:</b> If at least 50 % vegetation coverage is not established after 2 years, reinforcement planting should be performed.</p>	
<p>Check for dead or dying plants, and general long term plant health. <b>Remedy:</b> This vegetation should be cut and removed from the system. If woody vegetation is present, care should be taken to remove dead or decaying plant Material. Separation of Herbaceous vegetation rootstock should occur when over-crowding is observed.</p>	<p>As needed</p>





## CHECKLIST FOR INSPECTION OF BIORETENTION SYSTEM / TREE FILTERS

Location:  
 Inspector:  
 Date:  
 Time:  
 Site Conditions:  
 Days Since Last Rain Event:

Inspection Items	Satisfactory (S) or Unsatisfactory (U)	Comments/Corrective Action
<b>1. Initial Inspection After Planting</b>		
Plants are stable, roots not exposed	S      U	
Surface is at design level, no evidence of preferential flow/shoving	S      U	
Inlet and outlet/bypass are functional	S      U	
<b>2. Debris Cleanup (1 time/year minimum, Spring/Fall)</b>		
Litter, leaves, and dead vegetation removed from the system	S      U	
Prune/mow vegetation	S      U	
<b>3. Standing Water (1 time/year and/or after large storm events)</b>		
No evidence of standing water after 24-48 hours since rainfall	S      U	
<b>4. Vegetation Condition and Coverage</b>		
Vegetation condition good with good coverage (typically > 75%)	S      U	
<b>5. Other Issues</b>		
Note any additional issues not previously covered.	S      U	
<b>Corrective Action Needed</b>		<b>Due Date</b>
1.		
2.		
3.		
Inspector Signature		Date



## **APPENDIX B**

Control of Invasive Plants



## CONTROL OF INVASIVE PLANTS

During maintenance activities, check for the presence of invasive plants and remove in a safe manner as described on the following pages. They should be controlled as described on the following pages.

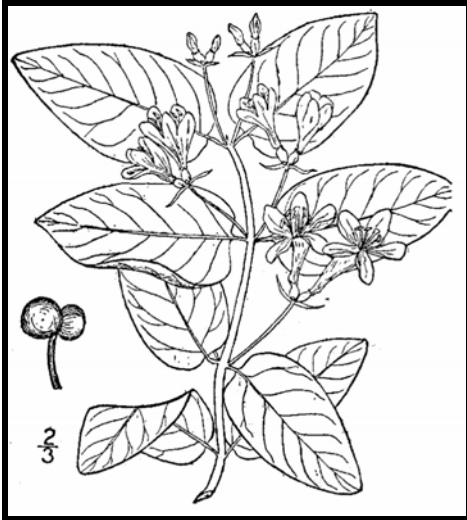
### Background:

Invasive plants are introduced, alien, or non-native plants, which have been moved by people from their native habitat to a new area. Some exotic plants are imported for human use such as landscaping, erosion control, or food crops. They also can arrive as "hitchhikers" among shipments of other plants, seeds, packing materials, or fresh produce. Some exotic plants become invasive and cause harm by:

- becoming weedy and overgrown;
- killing established shade trees;
- obstructing pipes and drainage systems;
- forming dense beds in water;
- lowering water levels in lakes, streams, and wetlands;
- destroying natural communities;
- promoting erosion on stream banks and hillsides; and
- resisting control except by hazardous chemical.

## Methods for Disposing Non-Native Invasive Plants

Prepared by the Invasives Species Outreach Group, volunteers interested in helping people control invasive plants. Assistance provided by the Piscataquog Land Conservancy and the NH Invasives Species Committee. Edited by Karen Bennett, Extension Forestry Professor and Specialist.



**Tatarian honeysuckle**

*Lonicera tatarica*

USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 3: 282.

Non-native invasive plants crowd out natives in natural and managed landscapes. They cost taxpayers billions of dollars each year from lost agricultural and forest crops, decreased biodiversity, impacts to natural resources and the environment, and the cost to control and eradicate them.

Invasive plants grow well even in less than desirable conditions such as sandy soils along roadsides, shaded wooded areas, and in wetlands. In ideal conditions, they grow and spread even faster. There are many ways to remove these non-native invasives, but once removed, care is needed to dispose the removed plant material so the plants don't grow where disposed.

Knowing how a particular plant reproduces indicates its method of spread and helps determine the appropriate disposal method. Most are spread by seed and are dispersed by wind, water, animals, or people. Some reproduce by vegetative means from pieces of stems or roots forming new plants. Others spread through both seed and vegetative means.

Because movement and disposal of viable plant parts is restricted (see NH Regulations), viable invasive parts can't be brought to most transfer stations in the state. Check with your transfer station to see if there is an approved, designated area for invasives disposal. This fact sheet gives recommendations for rendering plant parts non-viable.

Control of invasives is beyond the scope of this fact sheet. For information about control visit [www.nhinvasives.org](http://www.nhinvasives.org) or contact your UNH Cooperative Extension office.

### **New Hampshire Regulations**

Prohibited invasive species shall only be disposed of in a manner that renders them nonliving and nonviable. (Agr. 3802.04)

No person shall collect, transport, import, export, move, buy, sell, distribute, propagate or transplant any living and viable portion of any plant species, which includes all of their cultivars and varieties, listed in Table 3800.1 of the New Hampshire prohibited invasive species list. (Agr. 3802.01)

## How and When to Dispose of Invasives?

To prevent seed from spreading remove invasive plants before seeds are set (produced). Some plants continue to grow, flower and set seed even after pulling or cutting. Seeds can remain viable in the ground for many years. If the plant has flowers or seeds, place the flowers and seeds in a heavy plastic bag “head first” at the weeding site and transport to the disposal site. The following are general descriptions of disposal methods. See the chart for recommendations by species.

**Burning:** Large woody branches and trunks can be used as firewood or burned in piles. For outside burning, a written fire permit from the local forest fire warden is required unless the ground is covered in snow. Brush larger than 5 inches in diameter can't be burned. Invasive plants with easily airborne seeds like black swallow-wort with mature seed pods (indicated by their brown color) shouldn't be burned as the seeds may disperse by the hot air created by the fire.

**Bagging (solarization):** Use this technique with softer-tissue plants. Use heavy black or clear plastic bags (contractor grade), making sure that no parts of the plants poke through. Allow the bags to sit in the sun for several weeks and on dark pavement for the best effect.

**Tarping and Drying:** Pile material on a sheet of plastic and cover with a tarp, fastening the tarp to the ground and monitoring it for escapes. Let the material dry for several weeks, or until it is clearly nonviable.

**Chipping:** Use this method for woody plants that don't reproduce vegetatively.

**Burying:** This is risky, but can be done with watchful diligence. Lay thick plastic in a deep pit before placing the cut up plant material in the hole. Place the material away from the edge of the plastic before covering it with more heavy plastic. Eliminate as much air as possible and toss in soil to weight down the material in the pit. Note that the top of the buried material should be at least three feet underground. Japanese knotweed should be at least 5 feet underground!

**Drowning:** Fill a large barrel with water and place soft-tissue plants in the water. Check after a few weeks and look for rotted plant material (roots, stems, leaves, flowers). Well-rotted plant material may be composted. A word of caution- seeds may still be viable after using this method. Do this before seeds are set. This method isn't used often. Be prepared for an awful stink!

**Composting:** Invasive plants can take root in compost. Don't compost any invasives unless you know there is no viable (living) plant material left. Use one of the above techniques (bagging, tarping, drying, chipping, or drowning) to render the plants nonviable before composting. Closely examine the plant before composting and avoid composting seeds.





**Japanese knotweed**  
*Polygonum cuspidatum*  
USDA-NRCS PLANTS Database /  
Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 1: 676.


**Be diligent looking for seedlings for years in areas where removal and disposal took place.**

## Suggested Disposal Methods for Non-Native Invasive Plants

This table provides information concerning the disposal of removed invasive plant material. If the infestation is treated with herbicide and left in place, these guidelines don't apply. Don't bring invasives to a local transfer station, unless there is a designated area for their disposal, or they have been rendered non-viable. This listing includes wetland and upland plants from the New Hampshire Prohibited Invasive Species List. The disposal of aquatic plants isn't addressed.

Woody Plants	Method of Reproducing	Methods of Disposal
Norway maple <i>(Acer platanoides)</i> European barberry <i>(Berberis vulgaris)</i> Japanese barberry <i>(Berberis thunbergii)</i> autumn olive <i>(Elaeagnus umbellata)</i> burning bush <i>(Euonymus alatus)</i> Morrow's honeysuckle <i>(Lonicera morrowii)</i> Tatarian honeysuckle <i>(Lonicera tatarica)</i> showy bush honeysuckle <i>(Lonicera x bella)</i> common buckthorn <i>(Rhamnus cathartica)</i> glossy buckthorn <i>(Frangula alnus)</i>		<p><b>Prior to fruit/seed ripening</b></p> <p>Seedlings and small plants</p> <ul style="list-style-type: none"> <li>▪ Pull or cut and leave on site with roots exposed. No special care needed.</li> </ul> <p>Larger plants</p> <ul style="list-style-type: none"> <li>▪ Use as firewood.</li> <li>▪ Make a brush pile.</li> <li>▪ Chip.</li> <li>▪ Burn.</li> </ul>
		<p><b>After fruit/seed is ripe</b></p> <p>Don't remove from site.</p> <ul style="list-style-type: none"> <li>▪ Burn.</li> <li>▪ Make a covered brush pile.</li> <li>▪ Chip once all fruit has dropped from branches.</li> <li>▪ Leave resulting chips on site and monitor.</li> </ul>
oriental bittersweet <i>(Celastrus orbiculatus)</i> multiflora rose <i>(Rosa multiflora)</i>		<p><b>Prior to fruit/seed ripening</b></p> <p>Seedlings and small plants</p> <ul style="list-style-type: none"> <li>▪ Pull or cut and leave on site with roots exposed. No special care needed.</li> </ul> <p>Larger plants</p> <ul style="list-style-type: none"> <li>▪ Make a brush pile.</li> <li>▪ Burn.</li> </ul>
		<p><b>After fruit/seed is ripe</b></p> <p>Don't remove from site.</p> <ul style="list-style-type: none"> <li>▪ Burn.</li> <li>▪ Make a covered brush pile.</li> <li>▪ Chip – only after material has fully dried (1 year) and all fruit has dropped from branches. Leave resulting chips on site and monitor.</li> </ul>



Non-Woody Plants	Method of Reproducing	Methods of Disposal
<p>garlic mustard (<i>Alliaria petiolata</i>)</p> <p>spotted knapweed (<i>Centaurea maculosa</i>)</p> <ul style="list-style-type: none"> <li>▪ Sap of related knapweed can cause skin irritation and tumors. Wear gloves when handling.</li> </ul> <p>black swallow-wort (<i>Cynanchum nigrum</i>)</p> <ul style="list-style-type: none"> <li>▪ May cause skin rash. Wear gloves and long sleeves when handling.</li> </ul> <p>pale swallow-wort (<i>Cynanchum rossicum</i>)</p> <p>giant hogweed (<i>Heracleum mantegazzianum</i>)</p> <ul style="list-style-type: none"> <li>▪ Can cause major skin rash. Wear gloves and long sleeves when handling.</li> </ul> <p>dame's rocket (<i>Hesperis matronalis</i>)</p> <p>perennial pepperweed (<i>Lepidium latifolium</i>)</p> <p>purple loosestrife (<i>Lythrum salicaria</i>)</p> <p>Japanese stilt grass (<i>Microstegium vimineum</i>)</p> <p>mile-a-minute weed (<i>Polygonum perfoliatum</i>)</p>	<p><b>Fruits and Seeds</b></p> 	<p><b>Prior to flowering</b></p> <p>Depends on scale of infestation</p> <p>Small infestation</p> <ul style="list-style-type: none"> <li>▪ Pull or cut plant and leave on site with roots exposed.</li> </ul> <p>Large infestation</p> <ul style="list-style-type: none"> <li>▪ Pull or cut plant and pile. (You can pile onto or cover with plastic sheeting).</li> <li>▪ Monitor. Remove any re-sprouting material.</li> </ul> <hr/> <p><b>During and following flowering</b></p> <p>Do nothing until the following year or remove flowering heads and bag and let rot.</p> <p>Small infestation</p> <ul style="list-style-type: none"> <li>▪ Pull or cut plant and leave on site with roots exposed.</li> </ul> <p>Large infestation</p> <ul style="list-style-type: none"> <li>▪ Pull or cut plant and pile remaining material. (You can pile onto plastic or cover with plastic sheeting).</li> <li>▪ Monitor. Remove any re-sprouting material.</li> </ul>
<p>common reed (<i>Phragmites australis</i>)</p> <p>Japanese knotweed (<i>Polygonum cuspidatum</i>)</p> <p>Bohemian knotweed (<i>Polygonum x bohemicum</i>)</p>	<p><b>Fruits, Seeds, Plant Fragments</b></p> <p>Primary means of spread in these species is by plant parts. Although all care should be given to preventing the dispersal of seed during control activities, the presence of seed doesn't materially influence disposal activities.</p>	<p><b>Small infestation</b></p> <ul style="list-style-type: none"> <li>▪ Bag all plant material and let rot.</li> <li>▪ Never pile and use resulting material as compost.</li> <li>▪ Burn.</li> </ul> <p><b>Large infestation</b></p> <ul style="list-style-type: none"> <li>▪ Remove material to unsuitable habitat (dry, hot and sunny or dry and shaded location) and scatter or pile.</li> <li>▪ Monitor and remove any sprouting material.</li> <li>▪ Pile, let dry, and burn.</li> </ul>

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